

The embodiments of the invention in which an exclusive property right or privilege is claimed are defined as follows:

1. A knife comprising:
 - a handle;
 - a rotatable blade pivotally mounted to said handle;
 - a blade lock having a blade locking member;
 - at least one blade rotation member mounted on one side of said handle for opening and closing said blade;
 - a cam connected to and driven by said at least one blade rotation member, said cam adapted to contact said blade lock for engaging and disengaging said blade locking member with said blade;
 - said blade having an open blade lock portion and a closed blade lock portion, wherein said blade locking member is selectively receivable by said open blade lock portion and said closed blade lock portion for securing said blade, said blade lock being biased such that said blade locking member is urged toward one of said open and closed blade lock portions, and wherein said cam disengages said blade locking member from said closed blade lock portion when opening said knife and disengages said blade locking member from said open blade lock portion when closing said knife.
2. The knife of claim 1, wherein said blade locking member is a pawl, and said open and closed blade lock portions are recesses.
3. The knife of claim 1, wherein said blade includes a drive pin on said blade, and said cam includes at least one cam prong for rotating said blade by driving said drive pin.
4. The knife of claim 3, wherein said cam includes two cam shoulders, one cam shoulder being an opening shoulder, and the second cam shoulder being a closing shoulder.

5. The knife of claim 4, wherein said cam includes an opening cam prong and a closing cam prong, wherein said opening cam prong opens said blade by driving said drive pin in a blade opening direction, and wherein said closing cam prong closes said blade by driving said drive pin in a rotation opposite to that for opening.
6. The knife of claim 5, wherein said opening cam prong and said closing cam prong are circumferentially spaced such that said cam is able to rotate a predetermined distance before one of said cam prongs engages said drive pin.
7. The knife of claim 6, wherein said predetermined distance is approximately 40 degrees.
8. The knife of claim 1, wherein said blade includes a drive pin on said blade, and said cam includes a slot for rotating said blade by driving said drive pin.
9. The knife of claim 8, wherein said slot has opening and closing drive surfaces for engaging said drive pin surface.
10. The knife of claim 9, wherein said opening surface is circumferentially spaced a predetermined distance from said closing drive surface.
11. The knife of claim 10, wherein said predetermined distance is approximately 40 degrees.
12. The knife of claim 1, wherein said cam includes two cam shoulders, one cam shoulder being an opening shoulder, and the second cam shoulder being a closing shoulder.

13. The knife of claim 1, further including a pivot pin connecting said cam and said at least one blade rotation member, wherein said handle includes a pivot pin support hole on one side of said handle, said pivot pin being rotatably supported within said blade pivot pin support hole.
14. The knife of claim 13, wherein said pivot pin has an internally threaded through hole and said at least one blade rotation member has an externally threaded post, whereby said at least one blade rotation member is securely threadably fastened to said pivot pin.
15. The knife of claim 14, wherein said blade rotation member is a wheel.
16. The knife of claim 14, wherein said pivot pin includes a cam drive pin and said cam has a cam pin hole, wherein said cam drive pin engages said cam through said cam pin hole and causes said cam to rotate when said at least one blade rotation wheel is rotated.
17. The knife of claim 1, wherein said handle comprises a first handle side and a second handle side, wherein said first and second handle sides form a slotted blade cavity when said first handle side is attached to said second handle side.
18. The knife of claim 17, wherein said handle has a slotted open end, said rotatable blade being mounted to said handle at said slotted open end.
19. The knife of claim 1, wherein said blade lock is a cantilevered spring, said cantilevered spring having a blade spring fixed end and a blade spring free end distal to said blade spring fixed end, wherein said blade locking member is attached to said blade spring free end.
20. The knife of claim 19, wherein said blade locking member comprises a pawl, said open and closing blade lock portions being recesses, said locking pawl being

generally rectangular shaped and said open and closed blade lock recesses being generally rectangular shaped and adapted to receive said locking pawl, wherein said generally rectangular shaped locking pawl has tapered faces and radiused corners

21. The knife of claim 1, wherein said at least one blade rotation member includes a plurality of circumferentially spaced through holes to aid in gripping said at least one blade rotation wheel.
22. The knife of claim 1, wherein said handle is made from metallic material.
23. The knife of claim 1, wherein said handle is made from glass reinforced polymeric material.
24. The knife of claim 1, including two blade rotation members for opening and closing said blade, wherein said handle has a first handle side and a second handle side and one of said blade rotation members is mounted on said first handle side, and the second said blade rotation member is mounted on said second handle side.
25. A handheld multi-tool comprising:
 - a tool insertion member, said tool insertion member having a lead end and an operational end;
 - a handle, said handle including a tool insertion socket, said tool insertion socket adapted to receive said tool insertion member;
 - a rotatable blade pivotally mounted to said handle;
 - a blade lock having a blade locking member;
 - at least one blade rotation member mounted on one side of said handle for opening and closing said blade;
 - a cam connected to and driven by said at least one blade rotation member, said cam adapted to contact said blade lock for engaging and disengaging said blade locking member with said blade;

said blade having an open blade lock portion and a closed blade lock portion, wherein said blade locking member is selectively receivable by said open blade lock portion and said closed blade lock portion for securing said blade, said blade lock being biased such that said blade locking member is urged toward one of said open and closed blade lock members, and wherein said cam disengages said blade locking member from said closed blade lock portion when opening said blade and disengages said locking member from said open blade lock portion when closing said blade.

26. The handheld multi-tool of claim 25, including a tool lock adapted to retain said tool insertion member when said tool insertion member is inserted into said tool insertion socket, said tool lock including a tool lock member, said tool lock member being biased such that said tool lock member is urged toward said tool insertion member.
27. The handheld multi-tool of claim 26, wherein said tool lock is located on said handle, said tool lock including a cantilevered spring, said cantilevered spring having a spring free end and a spring fixed end distal to said spring free end, wherein said spring free end is located at said tool insertion socket, and wherein said cantilevered spring is adapted to bias said tool lock member toward said tool insertion member.
28. The handheld multi-tool of claim 27, wherein said tool lock member is attached to said spring free end.
29. The handheld multi-tool of claim 28, wherein said tool insertion member includes a lock hole, said lock hole adapted to receive said tool lock.
30. The handheld multi-tool of claim 29, wherein said tool lock member has a spherical head.

31. The handheld multi-tool of claim 30, wherein said lead end of said tool insertion member includes at least one ramp, said ramp adapted to raise said spherical head of said tool lock member.
32. The handheld multi-tool of claim 31, wherein said lead end of said tool insertion member includes two bilateral concave ramps, each of said ramps adapted to raise said spherical head of said tool lock member, when engaged therewith.
33. The handheld multi-tool of claim 28, further including a release button, said release button adapted to release said tool insertion member from said tool insertion socket.
34. The handheld multi-tool of claim 33, wherein said release button is attached to said spring free end.
35. The handheld multi-tool of claim 34, wherein said release button has a cylindrical shaft and said lead end of said tool insertion member has a C-shaped profile adapted to partially encircle said cylindrical shaft of said release button.
36. The handheld multi-tool of claim 35, wherein said handle includes a first handle side and a second handle side opposite said first handle side, wherein said first handle side includes said cantilevered spring, and wherein said second handle side includes a release buttonhole, wherein said release button protrudes through said release buttonhole.
37. The handheld multi-tool of claim 35, wherein said handle includes a slotted open end and a socket end distal to said slotted open end, wherein said blade is mounted to said handle at said slotted open end, and wherein said tool insertion socket is located at said socket end.

38. A handheld multi-tool comprising:
- a tool insertion member, said tool insertion member having a lead end and an operational end;
 - a handle having a tool insertion socket, said tool insertion socket adapted to receive said tool insertion member;
 - said handle including a lock tool having a cantilevered spring adapted to engage and retain said tool insertion member when inserted into said tool insertion socket.
39. The handheld multi-tool of claim 38, wherein said cantilevered spring has a spring free end and a spring fixed end, said spring free end located at said tool insertion socket.
40. The handheld multi-tool of claim 39, wherein said spring free end includes a tool lock member adapted to lock said tool insertion member when said tool insertion member is inserted into said tool insertion socket.
41. The handheld multi-tool of claim 40, wherein said tool insertion member includes a lock hole, said lock hole adapted to receive said tool lock member of said spring free end.
42. The handheld multi-tool of claim 41, wherein said tool lock member has a spherical head.
43. The handheld multi-tool of claim 42, wherein said lead end of said tool insertion member includes two bilateral concave ramps at said lead end, said concave ramps adapted to raise said spherical head of said tool lock member.
44. The handheld multi-tool of claim 39, further including a release button, said release button adapted to release said tool insertion member from said tool insertion socket.

45. The handheld multi-tool of claim 44, wherein said release button is attached to said spring free end.
46. The handheld multi-tool of claim 45, wherein said release button has a cylindrical shaft and said lead end of said tool insertion member has a C-shaped profile adapted to partially encircle said cylindrical shaft of said release button.
47. The handheld multi-tool of claim 46, wherein said handle has a first handle side, and a second handle side opposite said first handle side, wherein said second handle side includes a release buttonhole, wherein said release button protrudes through said release buttonhole.
48. The handheld multi-tool of claim 38, wherein said operational end of said tool insertion member is attached to a tool, wherein said tool is selected from the group consisting of a utility blade, pliers, wrench, screwdriver, and security tang with lanyard.
49. The handheld multi-tool of claim 38, wherein said handle includes a rotatable blade and a blade lock, said blade lock adapted to lock said blade in at least one of a blade open and a blade closed position.
50. The handheld multi-tool of claim 49, further including a rotatable cam adapted to engage and disengage said blade lock from said blade, wherein said cam is manually rotatable.
51. The handheld multi-tool of claim 50, further including a blade rotation member, and said handle includes an exterior portion and an interior portion, said blade rotation member being located on said handle exterior portion and said cam being located on said handle interior portion, wherein said blade rotation member is adapted to be grasped by the user to rotate said cam and said blade.

52. A knife comprising:

a handle;

a rotatable blade pivotally mounted to said handle, said blade having at least one blade lock portion;

a blade lock having a blade locking member, said blade locking member being receivable by said at least one blade lock portion for securing said blade, said blade lock being biased such that said blade locking member is urged toward said at least one blade lock portion;

at least one blade rotation member mounted on one side of said handle for opening and closing said blade;

a cam connected to and driven by said at least one blade rotation member, said cam adapted to contact said blade lock for engaging and disengaging said blade locking member with said at least one blade lock portion;

said blade having a drive pin, wherein said drive pin is adapted to be contacted by said cam and rotate said blade when said at least one blade rotation member is rotated.

53. The knife of claim 52, wherein said blade includes an open blade lock portion and a closed blade lock portion, and said cam includes two cam shoulders and two cam prongs, said cam shoulders adapted to engage and disengage said blade locking member from said blade lock portions, and said cam prongs are adapted to rotate said blade by driving said drive pin.

54. The knife of claim 52, wherein said blade includes an open blade lock portion and a closed blade lock portion, and said cam includes two cam shoulders and a cam slot, said cam shoulders adapted to engage and disengage said blade lock from said blade lock portions, and said cam slot is adapted to rotate said blade by driving said pin.

55. The knife of claim 52, wherein said blade lock is a cantilevered spring, said cantilevered spring having a fixed end and a free end distal to said fixed end, wherein said blade locking member is attached to said free end.
56. The knife of claim 55, wherein said blade locking member is a pawl, and said at least one blade lock portion is a recess.
57. The knife of claim 52, wherein said handle has a blade end and a tool insertion end distal to said blade end, said blade being mounted to said blade end, and said tool insertion end of said handle being adapted to receive a tool insertion member.
58. The knife of claim 57, wherein said tool insertion member is selected from the group consisting of a security tang with lanyard, utility blade, pliers, wrench, and screwdriver.